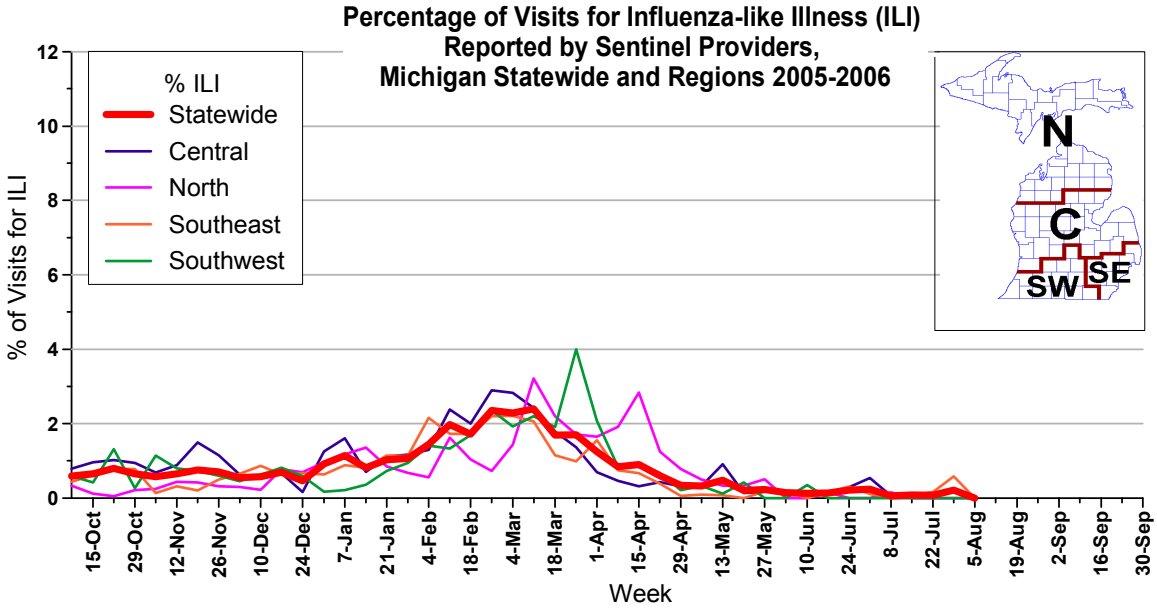
MIFluFocus
August 10, 2006
Weekly Influenza Surveillance and Avian Influenza Update

Syndromic Surveillance System Surveillance: Flu-like illness, as characterized by the syndromic surveillance systems, continues to demonstrate a very low overall level of activity. Flu-like illness reporting through the Michigan Disease Surveillance System has been negligible in recent weeks, as schools are closed for the summer. Over-the-counter pharmaceutical sales have been stable or decreasing for all flu-related products recently and the sales of all products (except for chest rubs) are at or below levels from last year at this time. No statewide alerts for increased respiratory or constitutional emergency department visits have been generated in recent weeks.

Sentinel Surveillance (**as of August 10, 2006**): During the week ending August 5, 2006, the proportion of visits due to influenza-like illness (ILI) decreased slightly from last week to 0.0% of all visits. No ILI activity was reported in any of the regions; the percentage of visits due to ILI by region was 0.0%, Central; 0.0%, North; 0.0%, Southeast; and 0.0%, Southwest.



As part of pandemic influenza preparedness, CDC and MDCH highly encourage and recommend year-round participation from all sentinel providers. Data that we obtain over the summer will help us to establish a baseline level of activity during months that are not typically associated with high levels of influenza activity. New practices are encouraged to join influenza sentinel surveillance program today! Contact Rachel Potter at 517-335-9710 or potterr1@michigan.gov for more information.

Laboratory Surveillance (as of August 10, 2006): No reports were received for the past week. The MDCH laboratory has confirmed 138 influenza cases in Michigan over the 2005-2006 season, of which 132 were influenza A (H3N2) and 6 were influenza B.

Influenza-Associated Pediatric Mortality (as of August 10, 2006, CDC data as of May 20): There were no new reports this week. For the 2005-2006 influenza season, Michigan had one confirmed influenza-associated pediatric death from region 2S. During October 2, 2005 – May 20, 2006, CDC received reports of 35 influenza-associated pediatric deaths, 33 of which occurred during the current influenza season.

***Reminder: The CDC has asked all states to continue to collect information on any pediatric death associated with influenza infection. This includes not only any death in a child less than 18 years of age resulting from a clinically compatible illness confirmed to be influenza by an appropriate laboratory or rapid diagnostic test, but also unexplained death with evidence of an infectious process in a child. Refer

to http://www.michigan.gov/documents/fluletter_107562_7.pdf for the complete protocol. It is important to immediately call or fax information to MDCH to ensure that appropriate clinical specimens can be obtained.

Congregate Settings Outbreaks (as of August 10, 2006): No reports were received during the past reporting week. A total of two congregate setting outbreaks have been reported to MDCH this season; one in Southwest Michigan in late February and one in Southeast Michigan in late March. Both outbreaks were MDCH laboratory confirmed as due to influenza A (H3N2).

The 2005-2006 Michigan Influenza Seasonal Summary is now available at http://www.michigan.gov/flu under "Seasonal Influenza – MDCH Laboratory Influenza Testing and Surveillance." Overall, this season was milder than the previous year, peaked in early to mid-March and was comprised mainly of influenza A infections.

National (Associated Press, August 2, 2006): Vaccines that protect against three strains of seasonal influenza considered most likely to strike the northern hemisphere this winter have received federal approval. The Food and Drug Administration said Wednesday that four manufacturers licensed to sell their vaccines in the United States should have 100 million doses available for the 2006-2007 flu season. Barring any changes, that record number would end years of flu shot shortages and production delays. The seasonal formulation includes one strain used in last year's vaccines and two new strains, the FDA said. The four vaccine manufacturers approved to sell flu vaccines in the United States are Novartis (formerly Chiron Corp.), GlaxoSmithKline PLC, MedImmune Inc. and Sanofi Pasteur SA.

International (WHO, as of July 14, 2006): During weeks 23–26, with the exception of Hong Kong Special Administrative Region of China and South Africa, where high levels of influenza activity were reported, overall influenza activity in both northern and southern hemispheres was low. In the Hong Kong Special Administrative Region of China, influenza A(H1N1) virus has been circulating since the first week of 2006, jointly with B virus until week 11 and then predominating. During week 23, A(H1N1) activity started to increase and during week 26, high level activity was noted. New Zealand reported an increase in A(H3N2) activity since week 23. Influenza activity was reported as regional during week 26. Influenza A(H3N2) activity in South Africa was reported as widespread during weeks 23–24, then declined rapidly and was reported as sporadic during week 26.

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Weekly influenza activity reporting to the CDC is finished for the 2005-2006 influenza season.

End of Seasonal Report

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Avian Influenza Activity

WHO Pandemic Phase: Phase 3 - Human infection(s) with a new subtype, but no human-to-human spread or rare instances of spread to a close contact.

International Update (WHO, August 7-9, 2006): The Ministry of Public Health in Thailand has confirmed the country's 24th case of human infection with the H5N1 avian influenza virus. The case, which was fatal, occurred in a 27-year-old man from the central province of Uthai Thani. He developed symptoms on July 24th, was hospitalized on July 30th, and died on August 3rd. Investigation of his source of infection revealed contact with household chickens, which began dying around one week prior to symptom onset. This is the country's second case of H5N1 infection, and second fatality, within the past two weeks. Confirmation of these cases follows an 8-month period in which no human cases were reported in the country. Recent outbreaks in poultry have been officially reported in two provinces, Phichit and Nakhon Phanom, both located in the northern part of the country.

The Ministry of Health in Indonesia has confirmed the country's 55th case of human infection with the H5N1 avian influenza virus. The case occurred in a 16-year-old male from West Java Province. He developed symptoms on July 26th, was hospitalized on August 4th, and died on August 7th. Prior to symptom onset, the case had contact with sick and dying chickens in his household. A joint investigation

by health and agricultural officials detected the H5 virus subtype in chickens from the household. Family members and close contacts have been placed under surveillance.

The Ministry of Health in Indonesia has confirmed the country's 56th case of human infection with the H5N1 avian influenza virus. The case occurred in a 17-year-old female from Jakarta Province. She developed symptoms on July 28th, was hospitalized on August 4th, and died on August 8th. An investigation into her source of infection found that pet pigeons were kept inside her home and that several neighboring households maintained flocks of backyard poultry. Animal health authorities have collected samples from birds in the neighborhood and these will be tested as part of the continuing investigation. Of the 56 cases confirmed to date in Indonesia, 44 have been fatal.

The Ministry of Health in China has retrospectively confirmed a human case of H5N1 infection dating back to November 2003. The case occurred in a 24-year-old member of the military service based in Beijing. The man developed symptoms on November 25, 2003 and was hospitalized with pneumonia. His condition deteriorated rapidly and he died of severe respiratory disease on December 3, 2003. Confirmation of this case marks the earliest known instance of human H5N1 infection in mainland China, and is now the first confirmed case in the present outbreak. Previously, the first confirmed cases were thought to have occurred in Viet Nam in December 2003. The case was initially reported by several Chinese researchers, affiliated with the military services, in a June 2006 letter to the New England Journal of Medicine. According to that communication, doctors initially suspected the man might have been infected with the SARS virus. Although WHO declared the SARS outbreak over in July 2003, suspicions were high that the virus might return during the cooler months. Specimens tested for SARS infection prior to the man's death were negative, but the cause of death remained undetermined. As stated in the published letter, stored specimens from the man subsequently tested positive for H5N1 infection. Successful isolation of the virus from these specimens was also reported. As the man's illness was initially thought to be SARS, no history of possible poultry exposure was taken. The source of his H5N1 infection remains uncertain, particularly as no poultry outbreaks of H5N1 avian influenza have been reported in Beijing.

The Ministry of Health informed WHO that it had been unaware of these tests and their results prior to publication of the research letter. In line with WHO recommendations, confirmatory testing in a laboratory affiliated with the Ministry of Health was arranged. Following an official request, WHO sent laboratory experts to consult with national experts performing the tests. That joint undertaking, conducted in late July, confirmed the man's infection with the H5N1 virus. These findings were further reviewed by a panel of experts, which concluded that the man's H5N1 infection was now laboratory confirmed. Prior to this announcement, the first official laboratory-confirmed H5N1 case on the Chinese mainland occurred in Hunan Province in October 2005 and was reported to WHO in mid-November 2005. The case has been added to the WHO cumulative table of confirmed cases. Retrospective confirmation of the case brings the cumulative total in China to 20. Of these cases, 13 have been fatal.

National Wild Bird Surveillance (USDA and DOI, August 9, 2006): Agriculture Secretary Mike Johanns and Interior Secretary Dirk Kempthorne today announced that their departments are expanding wild bird monitoring for highly pathogenic H5N1 avian influenza (HPAI H5N1) beyond Alaska through cooperative agreements and projects made with the lower 48 states, Hawaii and other Pacific islands. "We are working on several fronts to combat highly pathogenic avian influenza around the world and here at home," said Secretary Johanns. "Because we cannot control wild birds, our best protection is an early warning system and this move to test thousands more wild birds throughout the country will help us to quickly identify, respond and control the virus, if it arrives in the United States." Interior Secretary Kempthorne noted that a robust monitoring effort helps to ensure early detection should migratory birds carry this virus to North America. "These coordinated federal and state testing programs will be important this fall as birds now nesting in Alaska and Canada begin their migration south through the continental United States," Kempthorne said.

As part of the "An Early Detection System for H5N1 Highly Pathogenic Avian Influenza in Wild Migratory Birds -- U.S. Interagency Strategic Plan," USDA has completed cooperative agreements with 48 states

thus far and is finalizing agreements with 2 states, which cover all 50 states in the four major U.S. migratory bird flyways. These agreements provide nearly $4 million for state agencies to sample specific species of migratory birds at appropriate sites under plans coordinated through the four national flyway councils. Interior's U.S. Fish and Wildlife Service has finalized cooperative agreements with California, Idaho, Montana, Nevada, Oregon, Utah, and Washington as well as an agreement with Hawaii which will be completed soon. Thus far, these states and other cooperators have received $1.9 million from the Service to implement monitoring strategies in each state's surveillance plan. The five monitoring strategies were developed cooperatively among USDA, DOI and the states to ensure that priority wild bird species are sampled comprehensively throughout the southern Pacific Flyway and Pacific Islands. Together with Alaska, these are the priority areas identified by the national strategy because birds migrating from Asia intermingle with those that nest or overwinter primarily in these locations.

Because wild migratory birds are not controlled by boundaries and are found throughout the United States, USDA and DOI are teaming up with states to collect 75,000 to 100,000 wild bird samples along with 50,000 environmental samples throughout the United States, including Alaska, the lower 48 states, and Hawaii, Guam, U.S. Pacific Territories and Freely Associated States. The Alaska testing program, which is carried out by USDA, DOI, the State of Alaska and the University of Alaska, has been underway for several months and has tested nearly 10,000 wild birds, but no HPAI H5N1 has been detected. As birds from Alaska and Canada begin their southerly migration from these breeding grounds, state, federal and university biologists will capture and sample various species in every state. Specific wild bird sampling locations in each state depend on the weather and habitat conditions at the time of bird migration. State wildlife agencies, working through interagency groups, will determine the locations of the sampling sites as migration occurs and areas are identified where large groups of migratory birds are congregating. Sampling areas will include public lands (such as, national and state wildlife refuges, national and state parks) private lands with landowner approval and urban/suburban areas (such as ponds and city parks).

The national wild bird monitoring plan is part of the President's National Strategy for Pandemic Influenza. President Bush allocated $29 million in his Fiscal Year 2006 avian influenza supplemental funding package for implementation of the wild bird monitoring plan. This funding was allocated to USDA and DOI. Of the $17 million USDA received from the supplemental, nearly $4 million has been given to states through cooperative agreements for expanded wild bird monitoring. The remainder of the funding supports USDA sampling efforts, the purchase of sampling kits and the diagnostic costs for analyzing both bird and environmental samples. Of the $12 million DOI received, approximately $2.5 million has been dedicated to support state wildlife agencies and other partner organizations in collecting additional samples from wild birds. The balance is being used to support DOI sampling efforts, analyzing samples and creating a data management system for the state-federal wild bird sampling effort.

The US Fish and Wildlife Service in Anchorage, Alaska reported that 279 samples sent to the National Wildlife Health Center lab for avian influenza testing this week, with a cumulative total of 7095 samples sent this year. 6614 of these samples have been analyzed by the NWHC. Sampling Results for the presence of Highly Pathogenic H5N1: Negative - 6,614, Positive - 0. **Note:** Cumulative results include 77 samples that tested positive for the presence of avian influenza. Various types of avian influenza are common in wild bird populations, and most of these present little or no risk to wild birds, poultry, or humans. Nine of these samples were confirmed positive for the H5 subtype, but not the N1 subtype. None of the samples have tested positive for the Highly Pathogenic H5N1 virus that the current sampling program is attempting to find.

Michigan Wild Bird Surveillance: To learn about avian influenza surveillance in Michigan wild birds or to report dead waterfowl, go to Michigan's Emerging Disease website at http://www.michigan.gov/emergingdiseases

Table 1. H5N1 Influenza in Poultry (Outbreaks up to August 2, 2006)
(Source: http://www.oie.int/downld/AVIAN%20INFLUENZA/A_AI-Asia.htm Downloaded 8/4/2006)

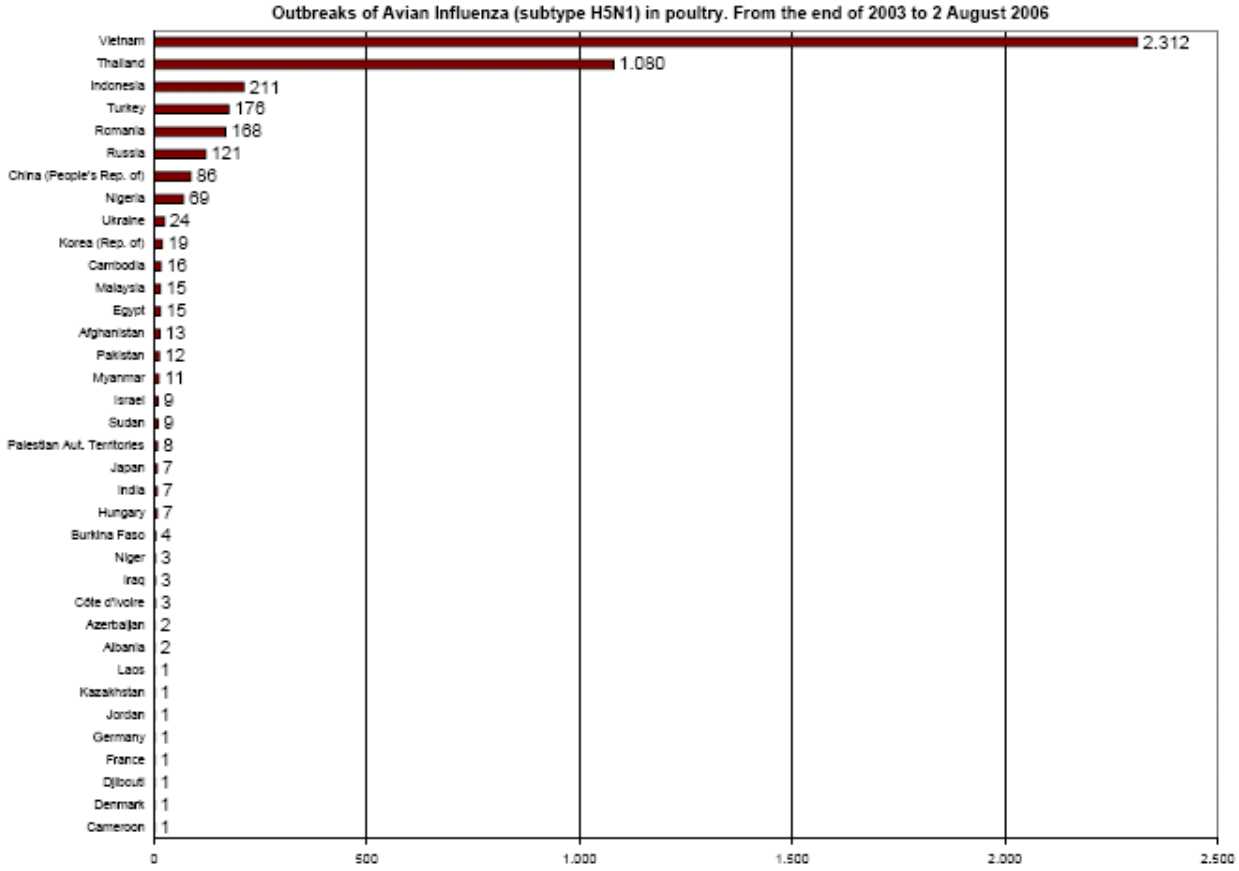

Table 2. H5N1 Influenza in Humans (Cases up to August 8, 2006)
(http://www.who.int/entity/csr/disease/avian_influenza/country/cases_table_2006_06_06/en/index.html Downloaded 8/9/2006)
Cumulative number of confirmed human cases of Avian Influenza A(H5N1) reported to WHO. The total number of cases includes number of deaths. WHO only reports laboratory-confirmed cases.

Country	2003		2004		2005		2006		Total	
	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths
Azerbaijan	0	0	0	0	0	0	8	5	8	5
Cambodia	0	0	0	0	4	4	2	2	6	6
China	1	1	0	0	8	5	11	7	20	13
Djibouti	0	0	0	0	0	0	1	0	1	0
Egypt	0	0	0	0	0	0	14	6	14	6
Indonesia	0	0	0	0	17	11	39	33	56	44
Iraq	0	0	0	0	0	0	2	2	2	2
Thailand	0	0	17	12	5	2	2	2	24	16
Turkey	0	0	0	0	0	0	12	4	12	4
Viet Nam	3	3	29	20	61	19	0	0	93	42
Total	4	4	46	32	95	41	91	61	236	138